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gradually become deeper until the conidia finally separate into three or four separate uniseptate segments of a short elliptical or nearly spherical shape, about 12μ in diameter, with the epispore distinctly roughened. We have compared this with specimens of *Septosporium Fuckelii*, Thüm., as represented in de Thümen's Mycotheca Universalis, 671, and with specimens collected in Algeria by Professor Viala. The California specimens differ in their much shorter hyphæ and very different conidia, which are much constricted at the septa. Plate X, Figs. 5 and 6.

NEW SPECIES OF HYPHOMYCETOUS FUNGI.

By J. B. Ellis and Benjamin M. Everhart.

Oidium pirinum, *n. s.* On leaves of *Pirus coronaria*, Racine, Wis., June, 1888. Dr. J. J. Davis, No. 31. Spots large, occupying a large part of the leaf, light brown, with definite, rather irregular outline, finally spreading over and killing the entire leaf. Conidia subglobose, with the surface slightly uneven, hyaline 12–16μ in diameter, closely concatenate in series of 3–4, the lower one supported on a slender basidium 10–12μ long. A portion of this basidium remains attached to the lower conidium as a short pedicel. The prostrate sterile hyphæ are either wanting or at least not conspicuous, the abundant pulverulent, light-cinereous conidia, which are mostly on the upper surface of the leaf, being the most conspicuous feature.

Ovularia compacta, *n. s.* On living leaves of *Macrorhyncus troximoides*. Wet mountain valley, Colorado, July, 1888. Demetrio, 182. Spots amphigenous, subelliptical, 1^{cm} in diameter, light brown or buff. Hyphæ simple, continuous, 15–25 by 4μ, slightly toothed above or entire, forming dense tufts and bearing at their tips the ovate 12–15 by 5–6μ conidia.

Langloisula. A new genus of *Mucedineæ*.

Hyphæ prostrate, much branched and interwoven, forming a loose, submembranaceous layer, and bearing the large solitary conidia at their extremities. Differs from *Monosporium* in the absence of any erect fertile hyphæ and from *Monilia* in its solitary conidia.

Langloisula spinosa, *n. s.* Growing around the base of the culms of *Andropogon muricatum* (in gardens). St. Martinville, La., January, 1889. Langlois, 1641.

Forms a thin, light-yellow layer like a *Corticium*, finally becoming of a deeper color (tawny-yellow) and subpulverulent, breaking up into frustules like *Corticium scutellare* B. & C., and falling off. The fungus is made up of prostrate yellow hyphæ 2–3μ in diameter, repeatedly dichotomously branched, the ultimate branches short, subulate or spiniform, bearing the globose or oval yellow conidia 12–14 μ in diameter in a loose layer partially covering the subjacent hyphæ. The ultimate branching of the threads reminds one of the sporophores of some of the *Peronosporeæ*. The general appearance is exactly that of a thin yellow *Corticium* like N. A. F. 657 ("*Gonytrichum fulvum*"), which we now think is only an imperfectly developed state of *Corticium cervicolor*, B. & C., being in fact only the lower sterile stratum of that species. The conidia in the Louisiana fungus resemble those of a *Monilia* in having a short appendage resembling the connecting cell between the spores in that genus, but we can not make out that the conidia are concatenate, the short appendage being rather of the nature of a pedicel. Plate X, Figs. 1 and 2.

RAMULARIA BRUNELLÆ, *n. s.* On living leaves of *Brunella vulgaris*. Racine, Wis., August, 1888. Dr. J. J. Davis, No. 9. Spots large, dark brown, more or less distinctly concentrically zoned above, rather indefinitely limited, more or less confluent so as often to cover nearly the entire leaf. Hyphæ hypophyllous, short, 10–15 by $2\frac{1}{2}\mu$, hyaline, mostly toothed above, forming minute white scattered tufts, scarcely visible. Conidia oblong-cylindrical, continuous, 10–15 by $1\frac{1}{2}$–$3\,\mu$.

RAMULARIA SEROTINA, *n. s.* On leaves of *Solidago serotina*. Lake County, Ill., July, 1888. Dr. J. J. Davis, No. 39. Spots amphigenous, 1–5^{mm} (mostly 2–3^{mm}), pale yellow-brown, with a narrow, definite, darker margin; sometimes confluent (1^{cm} or more), of somewhat irregular shape, but the smaller ones suborbicular. Hyphæ amphigenous, fasciculate subnodulose, and toothed above, continuous or faintly 1–2-septate, hyaline, 25–30 by 3μ. Conidia oblong-cylindrical, hyaline, 1-septate, 15–28 by 3μ, subconcatenate. On account of the definite spots and quite constantly 1-septate conidia this is different, from *R. virgaurea*, Thüm., which pertains to *Cercospora*, often having the conidia 50–75μ long.

RAMULARIA VIBURNI, *n. s.* On living leaves of *Viburnum lentago*. Racine, Wis., June, 1888. Dr. J. J. Davis, No. 27. Spots amphigenous, rusty brown (greenish-brown at first) 4–5μ in diameter, suborbicular, with a darker margin. Hyphæ amphigenous 12–20 by $2\frac{1}{2}$–3μ, hyaline, tufts erect, simple. Conidia fusoid-cylindrical, slightly curved, 1–3 septate, 20–40 by $1\frac{1}{2}$–2μ, yellowish-hyaline. Resembles *R. andromedæ*, E. & M., but is amphigenous, and the conidia are longer and have a greater number of septa.

CONIOSPORIUM CORTICALE, *n. s.* In bark of maple logs, London, Canada. Prof. J. Dearness, No. 2. Forms a brownish-black dusty stratum between the lamina of the bark. Conidia globose 3–4μ in diameter or elliptical or ovate-elliptical $4\frac{1}{2}$–5 by 3–4μ. The globose conidia comparatively few. This must come near *C. aterrimum*, Cda., but we think it different, though we have no specimen of that species.

FUSICLADIUM BREVIPUS, *n. s.* On leaves of *Astragalus hypoglottis*. Musie Pass, Sangre de Christo Range, Colorado, July, 1888. Demetrio, 199. Hypophyllous, forming small, scattered or subconfluent mouse-colored or smoky olivaceous patches scattered over the lower face of the leaf. Hyphæ, consisting of collections of subovate, brownish cells

8–12 by 5–7μ, from the tops of which arise the elliptical or oblong 25–55 by 8–11μ conidia, of an olivaceous brown color, at first continuous, then 1–2 septate, the longer ones attenuated below into a stipe like base. Approaches *Cercospora.*

CLASTERISPORIUM CÆSPITULOSUM, *n. s.* On rotten maple wood. Newfield, N. J., 1879. Conida fusoid-cylindrical, 12–20 septate, 100–120 by 12–15μ, subattenuated above, but with the apex distinctly rounded, abruptly contracted below, with a short stipe-like base attached directly to the wood without any perceptible prostrate threads. The conidia are nearly opaque, straight and erect, not constricted at the septa, but some of them are contracted near the middle. They grow in loose fascicles, which are more or less crowded, forming black tomentose patches or subeffused. Nearly allied to *C. larvatum*, C. & E., but differs in its *straight* conidia with short stipitate base.

HETEROSPORIUM HYBRIDUM, *n. s.* On dead stems of *Cleome integrifolia.* Helena, Mont., August, 1888. Rev. F. D. Kelsey, No. 137. Subcuticular, then erumpent, forming grayish-olive oblong, velutinous patches (2–3 by 1–2^{mm}), or by confluence 1^{cm} or more. Hyphæ erect, simple or sparingly branched; septate 100μ long or over, and 5–7μ thick. Conidia elliptical or oblong-elliptical, 1–2 septate (mostly only 1 septate), minutely hispid, slightly constricted at the septum. There are also regular Macrosporium conidia (apparently arising from the same hyphæ), clavate-obovate, pedicellate, about 4 septate, 15–50 by 10–15μ, the longer ones muriform. From its ambiguous character this is an unsatisfactory thing.

HETEROSPORIUM FUNGICOLUM, *n. s.* On old *Polyporus picipes.* Lincoln, Nebr. H. J. Webber. Olivaceous. Hyphæ 115–150 by 5–6μ, abruptly bent and crooked above, bearing laterally and terminally the oblong elliptical yellowish-brown 1–3-septate, minutely echinulate, 12–25 by 7–12μ conidia.

CERCOSPORA SYMPHORICARPI, *n. s.* On *Symphoricarpus vulgaris.* Rooks County, Kans. Mr. E. Bartholomew, 227 B. Hypophyllous, on small (1–2^{mm}), deep rust-colored round spots. Hyphæ fasciculate 30–40 by 3μ, continuous, brownish, denticulate above. Conidia clavate-oblong 20–30 by 3 μ; 1–3 septate.

CERCOSPORA VIRIDULA, *n. s.* On leaves of *Ipomea purpurea.* (Convolvulus.) Concordia, Mo., October, 1888. Rev. C. H. Demetrio, 214. Spots suborbicular ($\frac{1}{2}$–$\frac{3}{4}^{cm}$), rather indefinitely margined, dirty brown above, paler and greenish-brown below. Hyphæ epiphyllous, 25–35 by 4μ, pale brown, continuous, shouldered above, rising in small fascicles from a scanty tubercular base, thickly scattered on the spots, but inconspicuous. Conidia subcylindrical but narrowed above, subhyaline, 6–8-septate, 70–80 by 4μ. Differs from *C. ipomϾ*, Winter, in its more indefinite and larger spots and shorter conidia.

CERCOSPORA DUPLICATA, *n. s.* On large (4–6^{cm}) dark, dirty brown, irregular shaped spots on leaves of *Tecoma radicans.* St. Martinville, La., October, 1888. Langlois, 1549. Hyphæ epiphyllous, very short

(8–10μ), on a small (30-35μ) tubercular base, bearing at their apices the linear-lanceolate, subhyaline, faintly 3–6-septate 30–60 by 2½–3μ conidia. The spots are at first of a reddish-purple tint. This is entirely different from *C. sordida*, Sacc., an olivaceous effused species which was observed on the under side of the same leaves.

CERCOSPORA DOLICHI, *n. s.* On leaves of *Dolichos sinensis.* Starkville, Miss., September, 1888. Prof. S. M. Tracy. Amphigenous, but more abundant below. Hyphæ short 20–25 (exceptionally 30–35) by 4–5μ, olivaceous, entire or slightly toothed above, continuous or with one or two obscure septa, forming small but close tufts without any distinct tubercular base, the tufts scattered over almost the entire surface of the leaf both on the reddish spots and on the green parts of the leaf, but unevenly distributed, so as to present a clouded or mottled appearance. Conidia slender obclavate, hyaline, 3–5 or more septate, 50–100 by 3½–4. The spots are much like those of *Amerosporium œconomicum*, E. & T. (J. M. IV. p. 102), only not white, but rusty-red, or at most only whitish.

CERCOSPORA SII, *n. s.* On leaves of *Sium cicutæfolium.* Racine, Wis., September, 1888. Dr. J. J. Davis, No. 62. Mostly hypophyllous, in small (2–3^{mm}) but dense patches, but finally confluent, so as often to cover nearly the entire surface of the leaf, which is more or less mottled and stained yellowish, black above. Hyphæ loosely fasciculate, smoky, or olivaceous-hyaline, 40–60 by 5μ, strongly shouldered and toothed above, continuous or sparingly septate. Conidia lateral and terminal, oblong-cylindrical, mostly 1-septate, very slightly curved, granular, 20–45 by 5–7μ (mostly 30–40 by 6–7μ).

CERCOSPORA AGERATOIDES, *n. s.* On living leaves of *Eupatorium ageratoides.* Newfield, N. J., July to September, 1885. Hypophyllous. Tufts effused, forming olivaceous, velvety patches 1–3^{mm} in diameter, subangular and bounded by the veinlets of the leaf, finally confluent and nearly tobacco-brown. Hyphæ in minute tufts of 5–8 together, simple, septate, brown, subundulate above 50–90 by 4μ. Conidia cylindrical or lanceolate, 40–75 by 3½–5μ, 4–6 septate, pale olivaceous. Closely allied to *C. clavata*, Ger. The color and habit are much the same but besides the different host plant, this has the hyphæ longer and in tufts less dense, and the conidia, though of the same general character, not as variable in length and mostly narrower. On the same leaves are light colored subangular spots, also limited by the veinlets of the leaf, but they do not produce the *Cercospora.* In a var. of this (?) on *E. album*, the light-colored spots are wanting, the hyphæ mostly shorter (40μ.) and the conidia rather longer (70–80μ) and narrower (3μ).

CERCOSPORA PERFOLIATA, *n. s.* On living leaves of *Eupatorium perfoliatum.* Racine, Wis., September, 1888. Dr. J. J. Davis, No. 64. Hypophyllous. Hyphæ decumbent, with their free ends ascending, 30–40 by 4–5μ, nucleate, continuous, brownish, subentire and obtuse above, effused in suborbicular brown patches, not definitely limited and finally more or less confluent. The leaf is marked above with yellowish blotches, which finally become dark brown. Conidia *oblong*, pale tobacco-brown, nucleate becoming 1-septate, 20–35 by 5–6μ. The mode of growth is like that of *C. clavata*, Ger. Both this and *C. ageratoides*, E. & E., differ from *C. eupatorii*, Pk., which is on definite spots.

CERCOSPORA SIDÆCOLA, *n. s.* On living leaves of *Sida spinosa* St. Martinville, La., December, 1888. Rev. A. B. Langlois, No. 1555. Forming smoky black indefinitely effused velutinous patches on the under side of the leaf, the upper side remaining green or only slightly discolored. Hyphæ scarcely tufted, simple, multiseptate, reddish-brown (under the microscope), repeatedly shouldered above, slender, 150–225 by about 4μ. Conidia slender, obclavate, hyaline, granular and nucleate, becoming faintly 5–7-septate, 70–100 by 4–5μ.

CERCOSPORA FUSCO-VIRENS, Sacc. Prof. S. M. Tracy finds this at Madison, Miss., on *Passiflora incarnata* with hyphæ 40–50 by 4–5μ. Conidia 80–120 by 3–4μ. Are the measurements in Sylloge transposed? It would appear so from these specimens, which agree otherwise with Saccardo's description.

SPORIDESMIUM INSULARE, *n. s.* On bark of living oak. Flatbush, L. I., N. Y., December, 1888. Rev. J. L. Zabriskie, 52. Forming small, black, scattered patches, about as large as a pin head, or more or less confluent, bursting through the sterile, granular thallus of some lichen. Conidia arising from slender, subhyaline inconspicuous creeping threads, at first globose, and as in *S. sarcinula*, B. & C., marked by two septa at right angles, soon enlarged by the addition of a margin of peripheric cells and becoming 12–15μ in diameter; when growing beyond this size they usually become oblong 25–40 by 15–20μ, more or less irregular in shape. The component cells are about 3μ in diameter. We have not seen *S. epicoccoides*, B. & C., from which possibly this is not distinct. The conidia under the microscope remind one of *Cheirospora botryospora*, Fr.

DENDRODOCHIUM NIGRESCENS, *n. s.* On bark of *Acer negundo*. Sand Coulee, Cascade County, Mont., November, 1888. F. W. Anderson. Sporodochia erumpent, about 1^{mm} across, flesh color, becoming nearly black. Basidia dichotomously or subverticillately branched, mostly curved. Conidia oblong, hyaline, 5–7 by 1½–2μ.

NEW SPECIES OF FUNGI.

By W. A. KELLERMAN and W. T. SWINGLE.

SACIDIUM ULMI-GALLÆ, *n. s.* Spots none; pseudo-perithecia occupying indefinite blackened portions of the outside of the gall, rather few, subgregarious, indistinctly limited, black or dusky black, oval, elliptical or irregularly linear, ½–2 by ¼–½^{mm}, at first irregularly inflated, then depressed and corrugated, very early splitting nearly the whole length